

AMENDMENTS TO THE CLAIMS:

1 1. (currently amended) A method for plotting a graph using a markup language,
2 comprising the steps of:
3 receiving first graph information as a markup language document in response to a
4 request for a first graphic display and upon retrieval of ~~the first~~ corresponding
5 graph information from a data source according to the request and conversion
6 of the corresponding information to the markup language document, wherein
7 the markup language document is associated with a document type definition
8 that defines how to process the corresponding information in the markup
9 language document to plot a graph; and
10 plotting a graph that can be displayed as the first graphic display ~~on a display device~~
11 according to the markup language document and associated document type
12 definition; and
13 causing display of the graph as the first graphic display on a display device.

1 2. (currently amended) The method of claim 1 wherein the step of receiving first graph
2 information is performed such that a request for a second graphic display initiated
3 through interaction with the first graphic display does not require retrieving again the
4 ~~first graph~~ corresponding information from the data source.

1 3. (currently amended) The method of claim 2 wherein the second graphic display is an
2 incremental elaboration of the first graphic display;
3 wherein the step of plotting a graph that can be displayed as the first graphic display
4 is such that subsequently plotting the second graphic display does not require
5 plotting again the first graphic display.

1 4. (currently amended) The method of claim 1 wherein the first graph information as the
2 markup language document includes

3 image information for specifying a graphical image representing a focus entity for
4 plotting in the ~~first graphic display graph~~,

5 label information for specifying a label associated with the graphical image for
6 plotting in the ~~first graphic display graph~~,

7 connection information for specifying one or more connections between the graphical
8 image and one or more secondary graphical images; and

9 wherein the step of plotting the ~~first graphic display graph~~ is performed based on the
10 image information, the label information, and the connection information.

1 5. (currently amended) The method of claim 4 wherein the step of plotting the ~~first~~
2 ~~graphic display graph~~ is performed according to a display arrangement in which the
3 graphical image is substantially centered on the display device with the one or more
4 secondary graphical images connected to the graphical image in a generally circular
5 pattern.

1 6. (original) The method of claim 4 wherein the first graph information as the markup
2 language document further includes one or more of:
3 tool tip information for specifying information to display on the display device upon a
4 first interaction with the graphical image,
5 click action information for specifying an action to perform upon a second interaction
6 with the graphical image,
7 menu information for specifying a menu to display on the display device upon a third
8 interaction with the graphical image; and
9 wherein the step of receiving the first graph information is according to the markup
10 language document.

1 7. (original) The method of claim 4 wherein the first graph information as the markup
2 language document further includes

3 menu information for specifying a menu to display on the display device upon a first
4 interaction with the one or more connections; and
5 wherein the step of receiving the first graph information is according to the markup
6 language document.

1 8. (currently amended) The method of claim 1 wherein the step of plotting the ~~first~~
2 ~~graphic display graph~~ is performed according to one specified display arrangement
3 from a plurality of available display arrangements.

1 9. (currently amended) A method for displaying a network topology, comprising the
2 steps of:
3 receiving a markup language document associated with a document type definition
4 that defines how to process the corresponding information in the markup
5 language document to plot a graph, the document including
6 graph information specifying display attributes for plotting the network
7 topology;
8 network node information, the node information including
9 image information for specifying a graphical image representing a first
10 node for display on a display device,
11 node label information for specifying a node label associated with the
12 graphical image for display on the display device,
13 network node connection information specifying a connection between
14 graphical images and representing a network link between the first
15 node and a second node;
16 plotting the network topology based on the markup language document and
17 associated document type definition;

18 displaying on the display device, as part of the network topology, the graphical image
19 and the node label for the first node, according to the node information and
20 the graph information; and
21 displaying on the display device, as part of the network topology, the connection
22 between the graphical image representing the first node and at least a second
23 graphical image representing the second node, according to the node
24 connection information and the graph information.

1 10. (original) The method of claim 9 wherein the network node information further
2 includes one or more of the following:
3 tool tip information for specifying information to display on the display device upon a
4 first interaction with the graphical image,
5 click action information for specifying an action to perform upon a second interaction
6 with the graphical image,
7 menu information for specifying a menu to display on the display device upon a third
8 interaction with the graphical image; and
9 the method further comprises the step of:
10 enabling functions initiated by each of the first interaction, the second interaction, and
11 the third interaction.

1 11. (original) The method of claim 10 wherein the function initiated by the third
2 interaction includes retrieving a file for displaying information about one or more
3 network links between the first node and one or more nodes connected to the first
4 node.

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- 1 12. (original) The method of claim 10 wherein the function initiated by the third
2 interaction includes retrieving a file for displaying information about one or more
3 routers associated with the first node.
- 1 13. (original) The method of claim 10 wherein the function initiated by the third
2 interaction includes retrieving a file for displaying information about one or more
3 subnetworks associated with the first node.
- 1 14. (original) The method of claim 9 wherein the steps of displaying the graphical image
2 and the node label and displaying the connection are performed according to one
3 specified display arrangement from a plurality of available display arrangements.
- 1 15. (original) The method of claim 9 wherein the steps of displaying the graphical image
2 and the node label and displaying the connection are performed such that the
3 graphical image is substantially centered on the display element of the display device.
- 1 16. (original) The method of claim 9 wherein the step of displaying the graphical image
2 and the node label is performed such that graphical image size is related to the
3 number of connections to the graphical image.
- 1 17. (original) The method of claim 9 wherein the network node connection information
2 includes connection label information for specifying a label associated with the
3 connection and wherein the step of displaying the connection includes displaying the
4 connection label.
- 1 18. (original) The method of claim 17 wherein the connection label information includes
2 a cost parameter label that reflects the bandwidth capacity of the network link
3 represented by the connection.
- 1 19. (original) The method of claim 9 wherein the connection information includes

2 menu information for specifying a menu to display on the display device upon an
3 interaction with the connection; and
4 the method further comprises the step of:
5 enabling a function initiated by the interaction.

1 20. (currently amended) A computer-readable medium carrying one or more sequences of
2 instructions for plotting a graph using a markup language, wherein execution of the
3 one or more sequences of instructions by one or more processors causes the one or
4 more processors to perform steps of:
5 receiving first graph information as a markup language document in response to a
6 request for a first graphic display and upon retrieval of ~~the first corresponding~~
7 ~~graph~~ information from a data source according to the request and conversion
8 of the corresponding information to the markup language document, wherein
9 the markup language document is associated with a document type definition
10 that defines how to process the corresponding information in the markup
11 language document to plot a graph; and
12 plotting a graph that can be displayed as the first graphic display on a display device
13 according to the markup language document and associated document type
14 definition; and
15 causing display of the graph as the first graphic display on a display device.

1 21. (currently amended) The computer-readable medium of claim 20 wherein the first
2 graph information as the markup language document includes
3 image information for specifying a graphical image representing a focus entity
4 for plotting in the first graphic display graph,
5 label information for specifying a label associated with the graphical image
6 for plotting in the first graphic display graph,

7 connection information for specifying one or more connections between the
8 graphical image and one or more secondary graphical images; and
9 wherein execution of the one or more sequences of instructions by one or more
10 processors causes the one or more processors to perform the step of plotting
11 the ~~first graphic display graph~~ based on the image information, the label
12 information, and the connection information.

1 22. (currently amended) A computer-readable medium carrying one or more sequences of
2 instructions for displaying a network topology, wherein execution of the one or more
3 sequences of instructions by one or more processors causes the one or more
4 processors to perform steps of:

5 receiving a markup language document associated with a document type definition

6 that defines how to process the corresponding information in the markup

7 language document to plot a graph, the document including

8 graph information specifying display attributes for plotting the network
9 topology;

10 network node information, the node information including

11 image information for specifying a graphical image representing a first
12 node for display on a display device,

13 node label information for specifying a node label associated with the
14 graphical image for display on the display device,

15 network node connection information specifying a connection between

16 graphical images and representing a network link between the first
17 node and a second node;

18 plotting the network topology based on the markup language document and

19 associated document type definition;

20 displaying on the display device, as part of the network topology, the graphical image
21 and the node label for the first node, according to the node information and
22 the graph information; and
23 displaying on the display device, as part of the network topology, the connection
24 between the graphical image representing the first node and at least a second
25 graphical image representing the second node, according to the node
26 connection information and the graph information.

A. 1 23. (original) The computer-readable medium of claim 22 wherein the network node
2 connection information includes connection label information for specifying a label
3 associated with the connection and wherein execution of the one or more sequences
4 of instructions by one or more processors causes the one or more processors to
5 perform the step of displaying the connection including displaying a label
6 representing a cost parameter that reflects the bandwidth capacity of the network link
7 associated with the connection.

1 24. (currently amended) A computer system comprising:
2 a network interface;
3 a memory; and
4 one or more processors connected to the network interface, the one or more
5 processors configured for
6 receiving first graph information as a markup language document in response
7 to a request for a first graphic display and upon retrieval of ~~the first~~
8 corresponding graph information from a data source according to the
9 request and conversion of the corresponding information to the
10 markup language document, wherein the markup language document
11 is associated with a document type definition that defines how to

12 process the corresponding information in the markup language
13 document to plot a graph; and
14 plotting a graph that can be displayed as the first graphic display on a display
15 device according to the markup language document and associated
16 document type definition; and
17 causing display of the graph as the first graphic display on a display device.

- 1 25. (currently amended) An apparatus for displaying a network topology, the apparatus
2 comprising:
3 means for receiving a markup language document associated with a document type
4 definition that defines how to process the corresponding information in the
5 markup language document to plot a graph, the document including
6 graph information specifying display attributes for plotting the network
7 topology;
8 network node information, the node information including
9 image information for specifying an graphical image representing a
10 first node for display on a display device,
11 node label information for specifying a node label associated with the
12 graphical image for display on the display device,
13 network node connection information specifying a connection between
14 graphical images and associated with a network link between the first
15 node and a second node;
16 means for plotting the network topology based on the markup language document and
17 associated document type definition;

18 means for displaying on the display device, as part of the network topology, the
19 graphical image and the node label for the first node, according to the node
20 information and the graph information; and
21 means for displaying on the display device, as part of the network topology, the
22 connection between the graphical image representing the first node and at
23 least a second graphical image representing the second node, according to the
24 node connection information and the graph information.

1 26. (currently amended) A method for plotting a graph using a markup language,
2 comprising the steps of:
3 receiving a request for a graphic display;
4 retrieving first graph information from a data source according to the request;
5 generating a markup language document including the first graph information; and
6 transmitting the markup language document to a graphic application for plotting,
7 according to the markup language document and an associated document type
8 definition that defines how to process the corresponding information in the
9 markup language document to plot a graph, a graph that can be displayed as
10 the first graphic display on a display device according to the markup language
11 document and an associated document type definition.

1 27. (original) The method of claim 26 wherein the step of retrieving first graph
2 information is performed such that a request for a second graphic display initiated
3 through interaction with the first graphic display does not require retrieving again the
4 first graph information from the data source.

1 28. (original) The method of claim 26 wherein the markup language document includes:
2 image information for specifying a graphical image representing a focus entity for
3 plotting in the first graphic display,

4 label information for specifying a label associated with the graphical image for
5 plotting in the first graphic display,
6 connection information for specifying one or more connections between the graphical
7 image and one or more secondary graphical images; and
8 wherein the step of plotting the first graphic display is performed based on the image
9 information, the label information, and the connection information.

1 29. (original) The method of claim 28 wherein the markup language document further
2 includes one or more of:
3 tool tip information for specifying information to display on the display device upon a
4 first interaction with the graphical image,
5 click action information for specifying an action to perform upon a second interaction
6 with the graphical image,
7 menu information for specifying a menu to display on the display device upon a third
8 interaction with the graphical image; and
9 wherein the step of receiving the first graph information is according to the markup
10 language document.

1 30. (original) The method of claim 28 wherein the first graph information as the markup
2 language document further includes
3 menu information for specifying a menu to display on the display device upon a first
4 interaction with the one or more connections; and
5 wherein the step of receiving the first graph information is according to the markup
6 language document.